



Complete Summary

TITLE

Perioperative care: percentage of cardiac surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic antibiotics and who received a prophylactic antibiotic, who have an order for discontinuation of prophylactic antibiotics within 48 hours of surgical end time.

SOURCE(S)

American College of Surgeons, Physician Consortium for Performance Improvement®, National Committee for Quality Assurance. Perioperative care physician performance measurement set. Chicago (IL): American Medical Association, National Committee for Quality Assurance; 2006 Oct. 11 p. [8 references]

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the percentage of cardiac surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic antibiotics AND who received a prophylactic antibiotic, who have an order for discontinuation of prophylactic antibiotics within 48 hours of surgical end time.

RATIONALE

There is no evidence there is added benefit of prolonged prophylactic antibiotic use. Prolonged use may increase antibiotic resistant organisms.*

*The following clinical recommendation statements are quoted verbatim from the referenced clinical guidelines and represent the evidence base for the measure:

At a minimum, antimicrobial coverage must be provided from the time of incision to closure of the incision. For most procedures, the duration of antimicrobial prophylaxis should be 24 hours or less, with the exception of cardiothoracic procedures (up to 72 hours' duration) and ophthalmic procedures (duration not clearly established). (American Society of Health-System Pharmacists [ASHP])

There is evidence indicating that antibiotic prophylaxis of 48 hours duration is effective. There is some evidence that single-dose prophylaxis or 24-hour prophylaxis may be as effective as 48-hour prophylaxis, but additional studies are necessary before confirming the effectiveness of prophylaxis lasting less than 48 hours. There is no evidence that prophylaxis administered for longer than 48 hours is more effective than a 48-hour regimen. Optimal practice: Antibiotic prophylaxis is not continued for more than 48 hours postoperatively. (Society of Thoracic Surgeons [STS])

PRIMARY CLINICAL COMPONENT

Perioperative care; cardiac surgery; discontinuation of prophylactic antibiotics

DENOMINATOR DESCRIPTION

All cardiac surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic antibiotics AND who received a prophylactic antibiotic (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

NUMERATOR DESCRIPTION

Cardiac surgical patients who have an order for discontinuation of prophylactic antibiotics within 48 hours of surgical end time (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- [Antibiotic prophylaxis in cardiac surgery.](#)

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Use of this measure to improve performance
Variation in quality for the performance measured

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Agency for Healthcare Research and Quality (AHRQ). Making health care safer. A critical analysis of patient safety issues [AHRQ Publication No. 01-E058]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); 2001 Jul. 672 p.(Evidence report /technology assessment; no. 43).

Bratzler DW, Houck PM, Richards C, Steele L, Dellinger EP, Fry DE, Wright C, Ma A, Carr K, Red L. Use of antimicrobial prophylaxis for major surgery: baseline results from the national surgical infection prevention project. Arch Surg 2005 Feb;140(2):174-82. [PubMed](#)

Leatherman S, McCarthy D. Quality of health care for medicare beneficiaries: a chartbook. Focusing on the elderly living in the community. Vol. 815 New York (NY): Commonwealth Fund; 2005 May. 184 p.

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Internal quality improvement
National reporting

Application of Measure in its Current Use

CARE SETTING

Hospitals

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Individual Clinicians

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Unspecified

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness
Timeliness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

All cardiac surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic antibiotics AND who received a prophylactic antibiotic

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

All cardiac surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic antibiotics AND who received a prophylactic antibiotic

Note: Patients may be counted as having "received a prophylactic antibiotic" if the antibiotic was received within 4 hours prior to the surgical incision (or start of procedure when no incision is required) or intraoperatively.

Exclusions

Documentation of medical reason(s) for not discontinuing prophylactic antibiotics within 48 hours of surgical end time

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition
Therapeutic Intervention

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Cardiac surgical patients who have an order for discontinuation of prophylactic antibiotics within 48 hours of surgical end time

Note: There must be documentation of order (written order, verbal order, or standing order/protocol) specifying that prophylactic antibiotic is to be discontinued within 48 hours of surgical end time **OR** documentation that prophylactic antibiotic was discontinued within 48 hours of surgical end time.

Exclusions

None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Better quality is associated with a higher score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Measure #5: discontinuation of prophylactic antibiotics (cardiac procedures).

MEASURE COLLECTION

[The Physician Consortium for Performance Improvement® Measurement Sets](#)

MEASURE SET NAME

[Perioperative Care Physician Performance Measurement Set](#)

SUBMITTER

American Medical Association on behalf of the American College of Surgeons, the National Committee for Quality Assurance, and the Physician Consortium for Performance Improvement®

DEVELOPER

American College of Surgeons
National Committee for Quality Assurance
Physician Consortium for Performance Improvement®

FUNDING SOURCE(S)

Unspecified

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FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

Conflicts, if any, are disclosed in accordance with the Physician Consortium for Performance Improvement® conflict of interest policy.

INCLUDED IN

Ambulatory Care Quality Alliance
Physician Quality Reporting Initiative

ADAPTATION

This measure was harmonized to the extent possible to measures included in the Surgical Care Improvement Project (SCIP).

PARENT MEASURE

Unspecified

RELEASE DATE

2006 Oct

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

American College of Surgeons, Physician Consortium for Performance Improvement®, National Committee for Quality Assurance. Perioperative care physician performance measurement set. Chicago (IL): American Medical Association, National Committee for Quality Assurance; 2006 Oct. 11 p. [8 references]

MEASURE AVAILABILITY

The individual measure, "Measure #5: Discontinuation of Prophylactic Antibiotics (Cardiac Procedures)," is published in the "Perioperative Care Physician Performance Measurement Set." This document and technical specifications are available in Portable Document Format (PDF) from the American Medical Association (AMA)-convened Physician Consortium for Performance Improvement® Web site: www.physicianconsortium.org.

For further information, please contact AMA staff by e-mail at cqi@ama-assn.org.

NQMC STATUS

This NQMC summary was completed by ECRI Institute on September 13, 2007. The information was verified by the measure developer on October 26, 2007.

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Date Modified: 11/3/2008

